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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/620,654	07/16/2003	John Joseph Rabasco	06326 USA	1421

23543 7590 05/19/2005

AIR PRODUCTS AND CHEMICALS, INC.  
PATENT DEPARTMENT  
7201 HAMILTON BOULEVARD  
ALLENTOWN, PA 181951501

EXAMINER

TARAZANO, DONALD LAWRENCE

ART UNIT	PAPER NUMBER
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1773

DATE MAILED: 05/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/620,654	RABASCO ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	D. Lawrence Tarazano	1773	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 February 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

*il*

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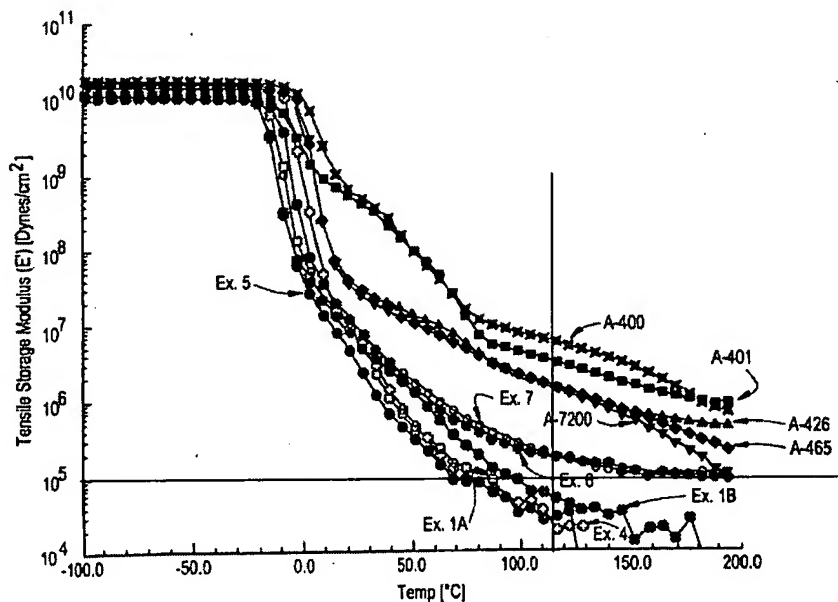
**DETAILED ACTION*****Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-4, 6-11, and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Daniels et al. (5,872,181).

**FIG. 1**

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Figure 1, clearly teaches materials both commercial and working examples which have a storage modulus of greater than  $1 \times 10^5$  dynes /  $\text{cm}^2$ . The materials are bonded to cotton fabric (column 9, lines 15+) , which is an example of a cellulose material as claimed. Specifically example 6 contains 65% vinyl acetate, 23% ethylene, and 3% acrylic acid. As described in example 2 (the general method used to make example 6), polyvinyl alcohol is present in the polymerization of the monomers.

Furthermore, Commercial Airflex <sup>TM</sup> materials (column 7, examples 8-12) also have the claimed storage modulus as shown in figure 1.

It appears that they have the heat of fusion and melting points claimed based on the materials and methods used to produce the polymers.

Specifically regarding the melting point of the polymers, there is clear reason to believe that the property would be inherent to the materials taught. First, the applicants claim a very broad range (35-110 deg C). Second the types of comonomers used and the amounts of them along with the polymerization conditions, follow closely to the process used by the applicants.

3. Additional monomers may use present including N-methylol acrylamide (column 2, lines 65+) and the amount of monomers claimed is clearly within the range claimed (column 2, lines

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Daniels et al. (5,872,181)

6. Regarding 5,872,181, additional monomers may use present including N-methylol acrylamide (column 2, lines 65+).

7. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used small amounts of N-methylol acrylamide in the polymers taught since this comonomer is suggested.

8. Regarding claim 5, the examiner takes the position that "about 50%" ethylene is suggested by the 45% ethylene suggested in the reference. The term "about" gives a certain amount of latitude to the reference.

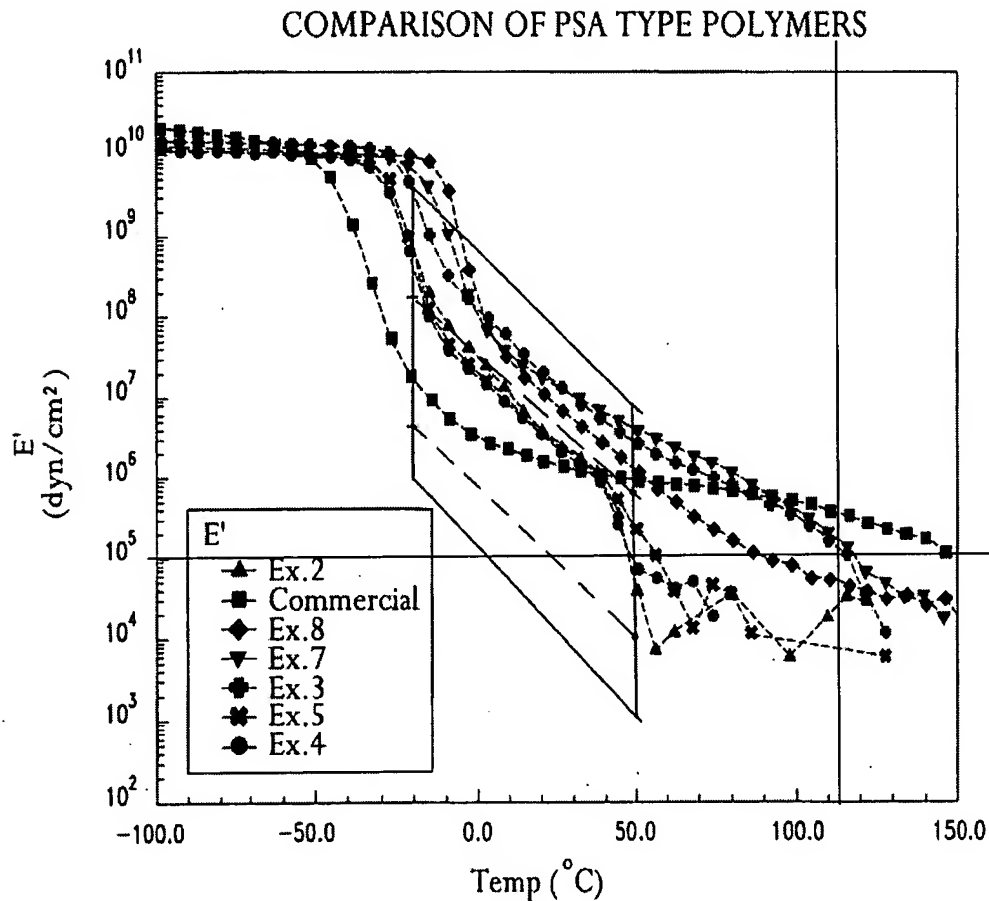
9. Regarding claims 11-18, since the background of the invention of the patent states that it is conventional to coat pressure sensitive adhesives on paper to make paper labels etc... It would have been obvious to one having ordinary skill in the art to have used either commercial products or the materials taught by Daniels et al. to coat paper or cardboard with them to make adhesive structure.

10. Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Daniels et al. (6,316,978).

11. US 6,316,978 clearly teaches polymers having the claimed storage modulus, while there are no examples showing the polymers coated on paper or other cellulose material, they disclose that pressure sensitive adhesives are widely use in the fabrication of "paper labels" (column 1, lines 11+).

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12. Regarding claims 1-18, since the background of the invention of the patent states that it is conventional to coat pressure sensitive adhesives on paper to make paper labels etc... It would have been obvious to one having ordinary skill in the art to have used either commercial products or the materials taught by Daniels et al. to coat paper or cardboard with them to make adhesive structure.



13. Claim 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over

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Daniels et al. (5,872,181 or 6,316,978) as discussed above in view of Worrall (3,355,322).

14. Worrall teaches that copolymers used to coat cellulose can contain 20-70% ethylene and 80-30% vinyl acetate (column 1, lines 41+).

15. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have 50-70% ethylene and the corresponding amounts of other monomers in the materials taught by Daniels et al. for coating paper substrates.

***Response to Arguments***

16. Applicant's arguments with respect to claims 1-18 have been considered but are moot in view of the new ground(s) of rejection.

***Request for Information under 37 CFR 1.105***

17. **MPEP: 706.02(c)**, Note that as an aid to resolving public use or on sale issues, as well as to other related matters of **35 U.S.C. 102(b)** activity, an applicant may be required to answer specific questions posed by the examiner and to explain or supplement any evidence of record. See **35 U.S.C. 132**, **37 CFR 1.104(a)(2)**. Information sought should be restricted to that which is reasonably necessary for the examiner to render a decision on patentability. The examiner may consider making a requirement for information under 37 CFR 1.105 where the evidence of record indicates reasonable necessity. See MPEP § **704.10** *et seq.*

18. It is clear that a series of Airflex™ materials were on the market prior to the filing of the instant application. Data in prior art patents teach that specific examples of these materials have the claimed storage modulus (see 6,063,858, column 7). The examiner feels that it is necessary

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to know specifically how these materials were marketed to the public prior to the filing of the instant applications; especially if there was any suggestion that they could be used on paper, cardboard, fabric, or cellulose products. This information is necessary to in determining the patentability of the instant claims.

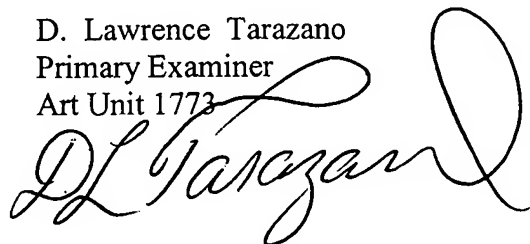
### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to D. Lawrence Tarazano whose telephone number is (571)-272-1515. The examiner can normally be reached on M-F 8:30AM to 6:00PM (second Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on (571)-272-1284. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. . Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

D. Lawrence Tarazano  
Primary Examiner  
Art Unit 1773

A handwritten signature in black ink, appearing to read "D. Lawrence Tarazano", is written over the printed name and title.